Year-Round Gardens

Color · Fragrance · Berry · Texture · Bloom

Washington Park

ARBORETUM BULLETIN

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Concerning this issue . . .

The year-round garden. Contemplate nuances of color and the subtleties of plant texture found throughout the garden calendar. Delight in the surprise of bud opening to blossom from January through December. Marvel at the importance of berries continually available to landscape and fauna. Finally, luxuriate in the fragrances that span memory, as well as time.

Once, I automatically asked horticultural experts to write in their articles about how they design with the plant elements, such as those above. After seeing so much panic in the eyes of noted authorities, I understand the Nike running shoe slogan. Writing about the creative process is difficult. Those who wallow in mud and seed "just do it."

The message is to merge with the elements of garden style, instead of hovering near the precipice of design indecision. Put your design censor on hold in favor of your gardening senses. First, meander through the basic favorites of practiced gardeners in this issue. Enjoyment of the elements leads to gardening style for all seasons.

Within, find the purple prose of Tom Berger, landscape architect, who explains how to keep the color purple (hence, any color) in your garden throughout the year. Enjoy Tim Hohn's thought processes as he unabashedly discusses how he would select favorite trees to keep perpetual blossom in the garden. Likewise, let Jan Pirzio-Biroli explain how berries accent the landscape from summer to winter. Follow in Jerry Sedenko's footsteps as he explains how a beautiful garden of personal favorites from childhood to the present also makes good gardening *scents*. See, instead of read, how to create interesting garden textures in the photo essay.

As usual, Valerie Easton, a librarian at the University of Washington Center for Urban Horticulture, ties together theme issues of the *Bulletin*. Here, Valerie discusses books about year-round gardens. She draws from the Elisabeth C. Miller Library, endowed by Betty and Pendleton Miller. You, too, can take advantage of this remarkable resource, which is open to the public. Use the Miller Library to learn more about planning your year-round garden or to research any aspect of horticultural science, landscape architecture, plant pathology, entomology, urban plant management, design, and nitty-grit gardening. Thousands of books, journals, and catalogs will answer your questions, as will the librarians who help you get to the next step.

Obviously, many people contributed to this issue—from editorial board members to authors and photographers. Thanks to them and to the instigator of this issue, Tom Berger, who helps reflect the best of the Washington Park Arboretum.

Jan Silver, Editor
The Washington Park Arboretum Bulletin

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In Bulletin *articles, an asterisk (*) indicates species, including varieties and/or forms, that can be found in the Washington Park Arboretum; a dagger (†) indicates specimens in the public collections of the University of Washington's Center for Urban Horticulture. Limited numbers of plants with an asterisk (*) can be propagated by the Pat Calvert Greenhouse for members of The Arboretum Foundation. The greenhouse, located near the Graham Visitors Center, 2300 Arboretum Drive East, is open from 10-12, Tuesdays.*

Cover photo: Background of blue spruce and dogwood, pink *Cistus* 'Doris Hibberson' (u.l.), bluish *Artemisia* 'Powis Castle' (l.l.), and *Erigeron karvinskianus* (l.r.), interrupted by purple waves of *Salvia* for a water-conserving garden. Photo by Dan Borroff at Children's Hospital, Seattle. See page 13, ''Purple for a Year.''

Contents photo: The glossy pink fruits of *Sorbus discolor*. For other suggestions about plants that fruit throughout the year, see page 2. Photo by Whitie Marten.

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The mission of The Arboretum Foundation is to ensure stewardship for the Washington Park Arboretum, a Pacific Northwest treasure, and to provide horticultural leadership for the region. This stewardship requires effective leadership, stable funding, and broad public support.

Articles on gardening and horticulturally related subjects are welcome. Please call the *Bulletin* for guidelines.

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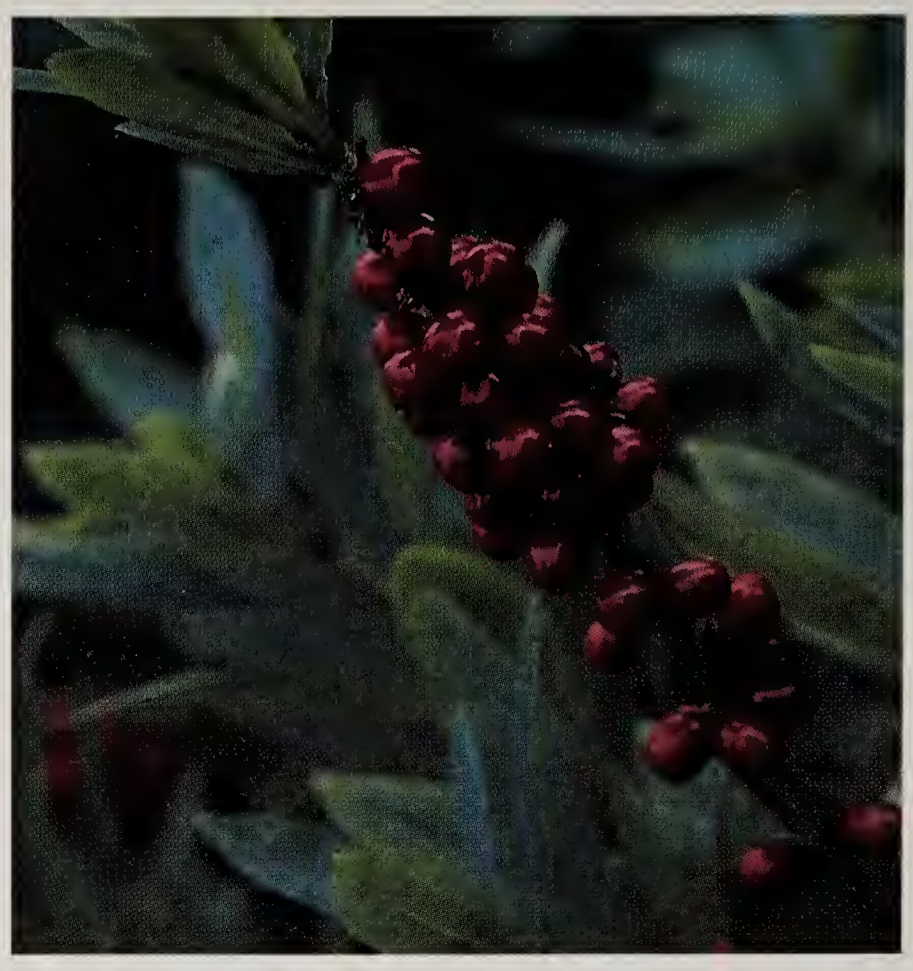
Joy Spurr

Oemleria cerasiformis exhibits the transition from ripening (orange) to fully mature purple fruits.



Joy Spurr

Daphne mezereum is valued for its winter flowers as well as for its decorative berries.

Joy Spurr

Pernettya mucronata: Large berries in soft colors contrast with small, pointed evergreen leaves.

Brian O. Mulligan

Sorbus koehneana: Small white fruits enhance the delicate texture of foliage.

Berries Through the Year

by Jan Pirzio-Biroli

Flowers, autumn color—berries. Any one of these (or some other seasonal attribute) generally influences a plant's selection for the garden. In the long run, however, it is the whole organism—its shape, size, branching habit, and leaves—that defines its contribution to a garden throughout the year. Nevertheless, flowers, berries, or other decorative features create additional layers of beauty in the landscape. If the flowers of a given species are lovely in themselves and subsequently are replaced by spectacular berries, we often say that this plant serves double duty in the garden. If, as may be the case in autumn, colorful foliage is accompanied by berries, the ornamental value of fruit serves to enhance the plant's effect.

But what is a berry? By definition, it is a fleshy fruit developed from a single pistil, fleshy throughout (Hitchcock 1973). However, in common parlance, the term *berry* has a much broader significance. Although the fruits of the barberry species fit the definition exactly, from the practical and visual point of view, most small, decorative fruits are commonly called *berries* even though, technically, they are not.

Rose hips and pomes (apple-like fruits) of mountain ash, hawthorn, and cotoneaster are usually thought of as berries, but most crab apples are too large to be considered thus. Although the term *berry* is usually applied to the one-seeded, fleshy fruits (drupes) of genera such as serviceberry (*Amelanchier*) and some of the flowering cherries, for similar reasons it does not attach itself to plums or apricots. Fruits which have several or many visually separate parts (e.g., spindleberry or raspberry) are obviously so called despite their complex structure.

Since berry-producing plants generally depend on birds for seed distribution, and because birds see red better than any other color, red or some version of it is the most common berry color. However, the laws of evolution are not exact. The white fruits of *Sorbus forrestii* may remain on the branches undisturbed until early December, but one morning a flock of robins will descend upon that tree and in less than an hour consume the feast that has been awaiting them. Similarly, species of *Amelanchier* produce purple-black fruits so attractive to birds that one must be extremely observant to see them before they disappear.

Calendar

It is ordinarily assumed that fruits are produced in late summer and autumn—in other words, harvest time—and that a fairly regular period (several months, perhaps) elapses between flowering and fruit production. This is usually true, but there are exceptions. For example, the strawberry tree (*Arbutus unedo*) blooms at the same time its fruits from the previous year ripen. *Elaeagnus macrophylla* flowers in autumn and bears its subtle, scale-covered drupes in late winter or very early spring. And if a male plant of Indian plum (*Oemleria*) is present when its flowers appear in early March, his herd of females will produce their drupelets in a month or two.

Winter: This is the time when we can enjoy the berries that remain from autumn. The pomes of firethorn and certain mountain ash (*Sorbus forrestii* and *S. hupehensis*) are left by birds at least into December. Many kinds of holly retain their fruits throughout winter or beyond. Scarlet berries of *Cotoneaster dammeri* remain singly among its evergreen leaves. The deep red ¼-inch pomes of the Washington thorn are unpalatable to birds and persist into early spring. The pulpy fruits of our native snowberry remain scattered among its thicket of slender branches. *Skimmia japonica* is another shrub whose berries are generally ignored by birds.

Spring: This season is probably the least fruit-

ful of the year. Remember, however, *Elaeagnus macrophylla*, in late winter and early spring. *Daphne laureola* and *Mahonia* x 'Arthur Menzies', which bloom in winter, quickly produce quantities of berries during the season.

Summer: By June—certainly by July—the harvest begins. Several native species fruit early: *Vaccinium parvifolium* and *V. ovatum*, *Gaultheria shallon*, *Mahonia nervosa*, and *Sambucus racemosa*. Among the exotic kinds are *Berberis darwinii*, *Daphne mezereum*, *Elaeagnus umbellata*, *Pernettya mucronata*, and the earliest of the *Sorbus* species.

Autumn: The harvest becomes a flood. If only roses and rose relatives were to be considered, we should be speaking of crab apple, hawthorn, mountain ash, firethorn, and cotoneaster; most of these genera have many species and, often, numerous hybrids and cultivars. This, of course, does not take into consideration all the other berry-producing genera.

Since fruiting of most plants is dependent upon bloom time, which is at least partially dependent upon the weather, we cannot offer hard-and-fast rules about fruiting schedules. Fruit of a given species sometimes ripens as much as a month or even two months apart over a period of several years. For that reason, let us consider some favorite plants in alphabetical order, with approximate fruiting dates based upon available information.

Glossary

Bract is a leaflike or sometimes petal-like organ beneath the true flower.

Calyx (plural: calyces) are all the sepals of a flower, collectively.

Corymb is a flat-topped inflorescence with the outer flowers opening first.

Cyme is a broad class of inflorescences characterized by having the terminal flower bloom first.

Drupe is a one-seeded fleshy fruit (e.g., a stone fruit).

Genera (pl. of genus) are categories of biological classification.

Glaucous refers to having a translucent waxy coating on leaves or needles, usually blue or white.

Inflorescence is the flower cluster of a plant.

Panicle is a branched flower cluster.

Pinnately compound leaves have leaflets arranged at intervals on each side of an axis.

Pistil is a female flower part.

Pomes are apple-like fruits.

Racemes are elongated inflorescences with stalked flowers.

Sepal is a member of the outermost set of flower leaves (the calyx), typically green or greenish and more or less leafy in texture.

Stoloniferous plants have horizontal, rooting stems. (Grant and Grant)

Urceolate is urn-shaped or pitcher-like.

x in a scientific plant name indicates a hybrid.

Berries for the Northwest Landscape

**Arbutus unedo* (strawberry tree), a madrona relative, is a large, rounded evergreen shrub. It comes into its full glory in autumn when it bursts into bloom and fruit at the same time. The flowers are urceolate (urn-shaped) in pendent clusters; the fruits are soft, round scarlet berries with a strangely pitted surface.

**Arctostaphylos uva-ursi* (kinnikinnick): One of the most useful evergreen ground covers, kinnikinnick is widespread around the northern hemisphere. Urceolate flowers somewhat smaller than those of *Arbutus*, in similar clusters, appear in spring, followed in late summer by bright red, shining berries that last into fall.

**Berberis darwinii* (Darwin's barberry) is just one example of several evergreen members of the genus. Its small, shining, spiny leaves are nearly covered in April by dense, drooping clusters of orange flowers. These are succeeded by ovoid purple berries in late summer.

Callicarpa (beautyberry) is a genus of shrubs grown almost exclusively for the 1/8-inch purple berries it produces in autumn.

**C. bodinieri* var. *giraldii* and its cultivar *'Profusion' have dense clusters of berries arranged at one-inch intervals along the stem.

**C. japonica* scatters its mauve fruit like a cloud throughout the branches, usually when its leaves turn pink. Its cultivar, *'Leucocarpa', has white fruit instead.

**Celastrus orbiculatus* (bittersweet): Scrambling into huge native conifers, this deciduous vine is covered in autumn and early winter with numerous fruits. A decorative two-tone effect is created by each orange three-valved capsule which opens to reveal the scarlet seeds within.

**Clerodendrum trichotomum* (Harlequin glorybower): Large clusters of flowers appear on the tips of branches in late summer. By October they have turned into bright blue drupes carried above a set of five fleshy carmine calyces. This stoloniferous plant, which is usually grown as a

shrub, sometimes appears in Northwest gardens as a spectacular tree.

Cotoneaster: If no other fruits were to appear in autumn, the landscape would still be rich with the red clusters of cotoneaster berries. Usually flowering in late spring or summer and fruiting in autumn, cotoneasters are a favorite source of food for birds. Thus, their seeds are often widely distributed, and many species breed true to type.

Crataegus (hawthorn): Among these small- to medium-sized deciduous trees, the following are outstanding garden subjects.

**C.* x *lavallei* (Carriere hawthorn) is a round-headed tree, ultimately to 30 feet. Large corymbs of white flowers in June are succeeded by ¾-inch orange-red pomes that mature in early autumn. These remain on the tree until the large, glossy leaves turn to almost the same color—a startling effect.

**C. phaenopyrum* (Washington thorn) is also round-headed and potentially the same height, but with delicate branches densely arranged. The two- to three-inch corymbs of white flowers give way to heavy clusters of tiny scarlet fruits that remain until spring.

Daphne: Two winter-blooming shrub species flower in late winter and bear fruits that are widely dispersed by birds.

**D. laureola* (spurge laurel) is low and evergreen with branches spreading from a narrow base. Greenish flowers along the stems give way to globose, black, ¼-inch berries in May or June.

**D. mezereum* (February daphne), in contrast, is deciduous and stiffly upright to three feet. The branches are lined in mid-winter with intensely fragrant mauve or whitish flowers. Juicy scarlet or orange berries follow in summer, poisonous to human beings but beloved by birds.

Elaeagnus species are usually large shrubs densely clothed with scales that give a sparkly effect to leaves, stems, flowers, and fruits.

E. macrophylla and its hybrid with *E. pungens*—*E.* x *ebbingei*—have evergreen leaves that are glistening white below. Nearly tubular flowers of fragrant white appear in late autumn, yielding in spring to oblong dark red berries dotted with shining scales.

**E. umbellata* is deciduous but the leaves also are white with scales. Creamy flowers in late spring are followed in early autumn by dense clusters of round, red, scaly fruits.

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Euonymus (spindleberry) species are favored for their autumn color in leaf and berry. The latter are compound fruits—colorful capsules opening to reveal equally colorful seeds within.

**E. europaeus* has crimson leaves enhancing the effect of bi-colored fruits—red, white, or pink—with orange seeds.

**E. sieboldianus*: Shell-pink leaves and shell-pink capsules are enriched by orange seeds.

**Gaultheria shallon* (salal): One of our most useful native plants, this evergreen shrub is stoloniferous, one to three feet high. Racemes of white, urn-shaped flowers tinged with pink in late spring give way in summer to juicy purple berries.

**Hypericum* x *inodorum* 'Elstead': Inch-wide yellow flowers decorate this two-foot deciduous shrub in summer. The glory of an otherwise typical hypericum, however, is the berries that appear in fall, resembling miniature persimmons, both in form and color.

Ilex species and hybrids (holly) are widely varying shrubs and trees whose fruits ripen in late autumn and usually persist for several months. Most of them are evergreen, except for the newly popular deciduous **I. verticillata* and a few of its relatives. Although holly berries are usually red, there are yellow-fruited cultivars, and the shrubby **I. crenata* produces black fruits instead. Numerous cultivars are available for selection.

Lonicera species (honeysuckle): Those described below are large, deciduous shrubs.

**L. involucrata* (twinberry): As the name implies, this Northwest native has pairs of yellow flowers and pairs of black fruits. Beneath them are arranged two pairs of reddish bracts. Flowers appear in early summer, the berries in fall.

**L. quinquelocularis* has shallow creamy flowers followed in November by remarkable translucent whitish fruits resembling gooseberries.

Mahonia is a barberry relative with evergreen, pinnately compound leaves.

**M. nervosa*, one of our most beloved Northwest natives, is a low, stoloniferous shrub with dark green or occasionally burgundy foliage. Racemes of bright yellow flowers in spring give way to clusters of ⅓-inch dark blue berries sometime in July.

**M.* x 'Arthur Menzies', introduced by the Washington Park Arboretum, is tall and slender with immense light green leaves. Six-inch-long upright racemes of bright yellow flowers develop at the tips of each branch in late autumn, soon followed by sprays of blue berries in winter or early spring.

**Malus sargentii* is one of the few crab apples with fruits small enough to be considered berries. A dwarf tree or shrub with white flowers nearly an inch across, it produces dense clusters of glaucous red pomes in autumn.

**Nandina domestica*, the famous "heavenly bamboo," is actually a *Mahonia* relative—a low slender shrub with lacy foliage. Large panicles of white flowers at the tip of each branch are succeeded by ¼-inch scarlet berries that persist through winter. Best fruiting is achieved through cross pollination by plants from different seedlings or seed sources.

**Oemleria cerasiformis* (osoberry or Indian plum), a deciduous shrub, is the earliest to bloom of our native plants. Upright clusters of soft green leaves in late winter accompany pendent racemes of greenish-white flowers, followed a month or two later by oval drupes that change rapidly from orange to purple.

**Pernettya mucronata* is a low Chilean shrub, evergreen with small pointed leaves. Masses of tiny white flowers in late spring give way in summer to colorful berries. Since they range from white to pink, rose, and even purple within the single species, it is best to select while in fruit or from named cultivars. A male plant is needed to produce fruit.

**Pyracantha* (firethorn): Species and hybrids of these evergreen shrubs usually are espaliered and trained for maximum fruiting effect. Corymbs of white flowers are followed by dense clusters of yellow, orange, or red berries which persist into winter. When the fermenting fruit is found by birds, a drunken spree ensues. They should be selected for disease resistance as well as for color preference.

Rosa species. Among innumerable species and hybrids, only a few can be included here. The following shrubs have been selected for their attractive hips (fruits) in fall and winter, as well as for their elegant flowers.

**R. moyesii*: Large, blood-red flowers in June are followed by orange-red, ovoid hips in late summer.

**R. nutkana* and *R. woodsii* are a pair of pink-flowered Northwest natives. Blossoms of *R. nutkana* are solitary, two inches wide; its hips are round and red. Those of *R. woodsii* are smaller, in few-flowered clusters; the

hips are orange-red.

R. rugosa has flowers of two and one-half to three inches, varying from white to purple, and tomato-shaped, brick-red hips.

**Sarcococca confusa* (sweet box) is a low shrub with shining evergreen leaves that nearly hide the incredibly fragrant white flowers in mid-winter. Glossy black fruits wait until autumn to appear and often persist through winter with the flowers. A close relative, **S. ruscifolia*, has attractive red fruits instead, but being less hardy it is rarely seen in our gardens.

Sorbus species (mountain ash, rowan) are deciduous trees and shrubs. Flowers are usually white, in corymbs. Decorative berries are produced from late summer into late autumn.

**S. commixta*: The six-inch inflorescences of these thirty-foot trees appear in spring, followed in mid-autumn by spectacular masses of scarlet fruits.

**S. koehneana* is a narrow shrub, upright to 12 feet tall. White berries develop in late September.

**S. scopulina* is one of several shrubby natives in the Cascade mountains, the first to produce its orange-red fruits in late summer. They are devoured by birds almost as soon as they ripen.

There are a number of small sorbus trees with white to pink fruits. Among them are:

**S. cashmiriana* and **S. forrestii* have larger white fruits which remain after the leaves have dropped.

**S. hupehensis*, a tall, slender tree, produces loose clusters of ¼-inch pink berries that persist even longer into winter than those of *S. forrestii*. The fruits of some clones turn white with maturity; others retain various shades of pink.

**S. vilmorinii*, whose clusters of ⅓-inch deep pink berries turn almost white in fall.

**Stranvaesia davidiana* var. *undulata* is a long name for a low, spreading evergreen shrub. Its ⅓-inch white flowers and attractive clusters of scarlet berries in fall are complemented by red leaves that appear scattered throughout the plant.

Symphoricarpos species are rock-hardy, stoloniferous deciduous shrubs with fruits retained in winter.

**S. albus* (snowberry) is a native species with tangled stems. Spikes of small pink flowers in summer are replaced by round, pulpy, ½-inch white berries.

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*S. *orbiculatus* (coralberry) has dense clusters of white flowers in late summer yielding to small, oval, purplish-red fruits.

Vaccinium: Of the many huckleberries, two native shrubs with urn-shaped flowers are outstanding garden subjects.

**V. ovatum* is an aristocratic, upright, evergreen with one-inch leathery leaves. Nodding racemes of pink flowers in late spring are followed by edible glaucous black berries in summer.

**V. parvifolium* often grows out of stumps in our wild gardens. Numerous slender, angled green stems are decorative with or without the small thin deciduous leaves. Pinkish-white flowers give way to translucent red berries in late summer.

Viburnum: The following shrubs are selected for their handsome berries.

**V. davidii* is a low, spreading evergreen with large, deeply veined leathery leaves. Dense cymes of small white flowers yield to shining, oval blue fruits in late summer, but only if a pollinating plant is present.

**V. opulus*, the highbush cranberry, is tall and spreading with white inflorescences that resemble lace-cap hydrangeas. Its deciduous lobed leaves turn red to purple in autumn, enhanced by luscious clusters of translucent, scarlet, ⅓-inch berries.

**V. tinus* (laurustinus) is a large dense evergreen whose two-inch cymes of pink buds in December open later in winter to small white flowers. These are often accompanied by ovoid steel-blue fruits from the previous year.

Jan Pirzio-Biroli, an Arboretum Foundation member since 1960, edited the *Arboretum Bulletin* in the late 1970s while completing a master's degree in botany. After 11 years on the Arboretum staff, she retired in 1991.

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A Year of Fragrance

by Jerry Sedenko

We usually think of gardens as visual delights. We work for years to achieve just the right effects of color and texture. If any of the plants we include happen to be fragrant, we consider it a bonus. But with just a bit more attention to fragrance, and by intentionally including aromatic plants, we can add an extra dimension to an already visually pleasing garden setting.

There are several kinds of fragrance. Flowers immediately come to mind, but leaf aromas can be at least as potent. Once, when I was young, I was remodeling a disaster of a garden in San Francisco. Step one was removing the rank growth that was there. What made it a particularly odious task were the dozens of rue plants (*Ruta graveolens*) that stank to the high heavens. It is a beautiful, lacy blue-green landscape subject, but puts forth the ''weediest'' scent of any plant I know. Like many leaf scents, it has to be brushed up against, or you will not smell a thing, so plant rue where it remains undisturbed by your passings, and enjoy it for its visual characteristics.

Leaf scents generally evolved to discourage animals from eating plants. These fragrances usually connote an unappealing taste, as well. And though a whiff of rosemary or sage can be intriguing in the garden or the stew pot, a whole mouthful, for you or a grazing animal, is not so appealing. In future encounters, the smell alone is enough to discourage animal munchings.

Flower fragrances, on the other hand, usually evolved to attract pollinators. Insects are very sensitive to smells, the tiniest amount of a substance being detectable from long distances. Night-blooming flowers tend to be even more potent, as if to compensate for the lack of light available to pollinators. However, some flowers produce scents that human noses find offensive. Many of the aroids, relatives of jack-in-the-pulpit, are pollinated by carrion flies, and are therefore redolent of rotting flesh. I once encountered about thirty specimens of voodoo lily (*Sauromatum guttatum*) all in full bloom. Not a pleasant experience for a human, it was probably carrion fly paradise. Like so many things, it is all relative.

Also, be aware that not all aromas are ''free on the air.'' One of the plants that springs to mind when considering fragrance is the rose. However, with few exceptions, you must put your nose practically in the bloom before you sense anything. To do this is part of the rose experience, but a planting of nothing but closely held scents defeats the purpose of gardening for fragrance.

Recently, theme gardens have caught on, such as all-white plantings or butterfly-attracting gardens. Gardens of fragrance tend to be one of the most popular forms of theme gardening. If I had the luxury of space, such as my urban Seattle lot does not allow, I would love to try my hand at composing a scented corner of the garden. It would be a mixture of shrubs, perennials, and annuals, as well as herbs, with a fence or trellis structure for scented vines. I would also choose some things with airborne scent, and others that need close-up appreciation. A low wall with thyme and rosemary draped over it would be a must, as well as stone or broken-concrete paving with more thyme and Corsican mint (*Mentha requienii*) in the crevices, just waiting to be lightly trod upon—a piquant bonus for the treader.

Winter

In winter, a low edging of **Sarcococca humilis* would give the formal feeling of box, but its freely offered scent of vanilla would permeate the air for quite a little distance. A specimen of February **Daphne mezereum* would stand, naked and gaunt, each branch tipped with a cluster of heavenly fragrance. In the background, eight-foot-tall witch hazel (**Hamamelis* varieties), with its peculiar pom-poms of yellow to coppery-red fringe, would consort with wintersweet (**Chimonanthus praecox*) and *Viburnum bodnantense*—either **'Dawn' or 'Deben'. It seems to me that winter fragrances are some of the strongest, perhaps because the pollinators are few and far between, so plants make an extra effort to attract them. All the winter-bloomers mentioned certainly have this characteristic. The smallest sprig of witch hazel, waxy pale yellow wintersweet, or gaunt twigs of pink-balled viburnum in blossom fill a room with sweetness.

Lower to the ground, next to a path, in a spot where I could enjoy it when coming or going, I would plant a tussock of *Iris unguicularis* or *I. cretensis*. The purple flowers, dozens of them, are nestled in the grassy foliage, and you have to hunker down on all fours to get the scent. Such contortions are worth it to me for the violet or primrose aroma that I know is lurking there.

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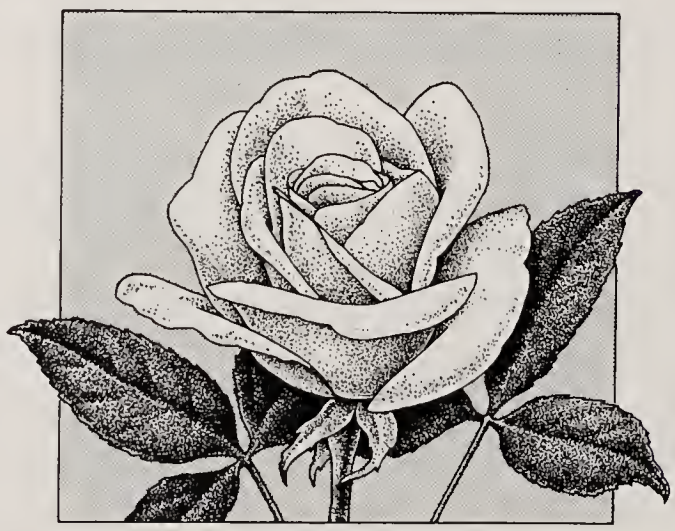

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and hyacinths are some of the most enticing. And although hyacinths decline rather too quickly, most narcissus multiply and bloom for years. An almost-bulb is the lily of the valley (*Convallaria majalis*)—it reminds me of tiny Easter bouquets of my youth. I would plant carpets of it under deciduous shrubs, since it goes ratty by midsummer, and you need something else to look at. The lily of the valley would have to fight it out with sheets of violets, which come in many colors, and hold up better in the summer.

Somewhere at the top of that low wall would go *Daphne cneorum*. It needs good drainage for its mats of pink to thrive. This is also a likely spot for *Dianthus* varieties, with their clean clove scent. Tuck in a tuft or two of lemon lily (*Hemerocallis lilio-asphodelus*). And if I have a wall, I would have wallflowers. I like the modern selections from Sutton's Seeds, but the old-fashioned mix of maroon, yellow, crimson, and mahogany is subtle and, I think, even more fragrant. For the truly nostalgic, keep an eye out for the old striped ones. If it is a pure stand, they will come true from seed, or one may simply make cuttings.

I would have lilacs of course, even if their glory lasts only three weeks and they are a total bore the rest of the year. And although viburnums do not bloom much longer, their incomparable fragrance is indispensable and their foliage also looks good all summer. For hedging, both **Osmanthus delavayi* and **O.* x *burkwoodii* fit the bill, with thousands of fragrant tiny white blossoms. An underused American native is a currant, **Ribes aureum*. Its myriad golden flowers have a heady, spicy aroma. If I liked rhododendrons, and had lots of room, I also would probably go for varieties of **Rhododendron* x 'Loderi' hybrids whose huge bells of blush pink give the added plus of heady scent.

Along the top of the fence, the drapery of **Clematis armandii* would burst forth each spring in a cloud of orange-blossom scented white. If my house were nearby, or I had a large conifer, I would train a *wisteria along the eaves, or let it ramble at will in the tree. A too-confined wisteria is a crime.

Summer

Summer brings annuals, like sweet alyssum, stock, heliotrope, mignonette, and a plant that grows to perfection in the Northwest—sweet peas. Another old-timey plant is dame's rocket (*Hesperis matronalis*). Tough and prolific, its fragrance intensifies in the evening, which makes it a natural for proximity to an outdoor dining area.

Joy Spurr

Daphne mezereum in late winter

In a dry spot, butterfly bush (**Buddleia davidii*) lives up to its name. Early in the season, **Choisya*, with strongly scented leaves and white fragrant flowers, would do double duty, whereas in late summer, sweet pepper bush (**Clethra alnifolia*) charms at a rather difficult time of the year. We do not usually think of **Cistus* as a fragrant shrub, but many varieties fill the air for yards around on a hot summer day with resinous sweetness emanating from their leaves.

I love the tea-with-lemon scent of **Magnolia grandiflora*, but if I were shy on space, I would find the cultivar 'Little Gem', which is more of a shrub. Of similar aromatic quality is **Pittosporum tobira*, unfortunately not the hardiest of plants.

If only for the childhood memories, I would plant a **Daphne odora*, and one of the many cultivars of mock orange, **Philadelphus*. A plant which not everyone understands is Spanish broom (**Spartium junceum*). It suffers from the reputation of Scotch broom. But it is definitely a horse of a different color. Whippy, minutely leaved branches bear large lemon-yellow pea flowers,

The orange-blossom scented spring flowers of *Clematis armandii*

Joy Spurr

with a light scent, commencing weeks of bloom just as the dreaded Scotch broom finishes.

One rose to definitely include is the Bourbon 'Zephyrine Drouhin', whose brilliant pink flowers produce one of the few "free" scents in rosedom. It is also thornless.

I am fascinated by vines, as you may have gathered. For summer, I would plant honeysuckle and poet's jasmine (*Jasminum officinale*). But my favorite, one I sought for ten years, is Chilean jasmine (*Mandevilla laxa*). For most of the summer, in a hot spot, it regales with clusters of two-inch white trumpets that have a gardenia scent. In fall, it sports the most unusual seed pods; they are like paired, slender beans (but joined at top and bottom), which turn crimson.

Autumn

Autumn is probably the least fragrant season, as far as flowers go. Therefore, my garden would rely quite heavily on herbs and other plants with aromatic leaves. Some of my favorites are lavender, sages, and hyssop. Catmint (*Nepeta*) has lost much of its feline appeal by late summer; if cut back in midsummer, it will yield a second show of blossoms. The appropriately named variety 'Six Hills Giant' is a match for almost any cat, as is the bolt-upright *Nepeta tuberosa*.

In cool summer areas, lemon verbena (*Aloysia triphylla*) blooms in the fall, and earlier where it is warmer. The dainty lacy flower heads put out the same distinctive lemon-cinnamon fragrance as the leaves. As a teenager, whenever I walked home from my job reshelving books at the local library, I would pass a venerable six-footer, and filch a twig to sniff the rest of the way home.

The fall osmanthus permeates the air with gardenia scent. Instead of holly, I would plant **Osmanthus heterophyllus* although it, too, has toothed foliage, but is not as spiny. My favorite is **Osmanthus* x *fortunei*. Knowing that it is a hybrid between *O. heterophyllus* and *O. fragrans* should tell you that this is a good one.

Autumn is also the season for the last Oriental hybrid lilies derived from *Lilium speciosum*. Their enormous bowls in white and pinks have some of the most intoxicatingly powerful perfumes imaginable. What a burst of glory to cap off a year of fragrance.

Jerry Sedenko is the author of *The Butterfly Garden–Creating Beautiful Gardens to Attract Butterflies*.

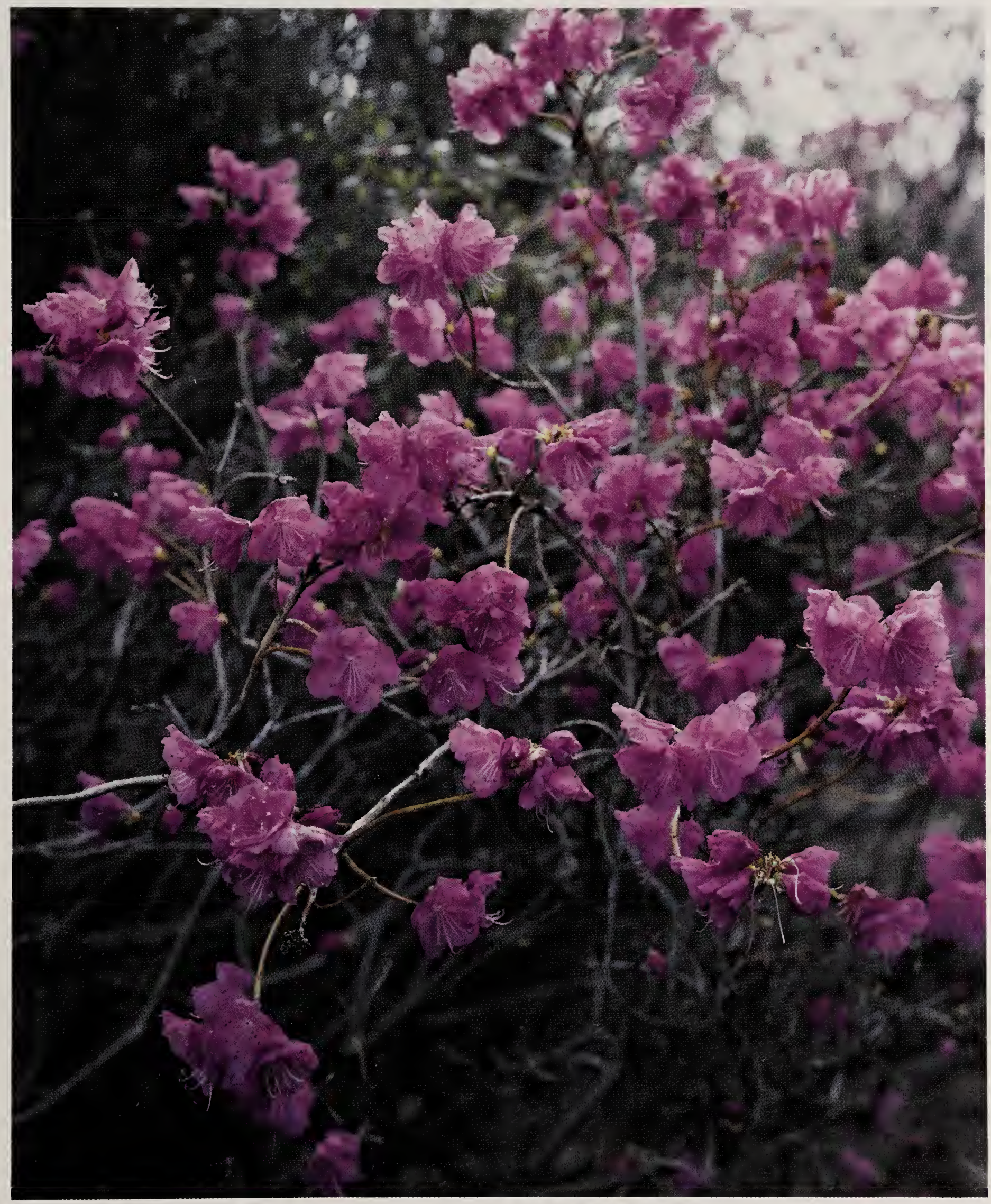
Summer's *Hesperis matronalis* flowers

Joy Spurr

Purple for a Year

by Thomas Berger

Imagine the garden with a single color, always present throughout the year, yet presenting itself in different shapes, textures, heights, and hues. For example, picture a garden that, although having seasons, more importantly has a continuous flow of purple. Allow the color purple to meander around in its hue and range, from the deepest, darkest, black-purple of *Rhododendron* 'Black Sport' to the soft



David McDonald

Pale mauve *Rhododendron mucronulatum* in winter—a light hue of purple.

The Berger Partnership

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Almost orchid-like, the bearded iris provides memorable fragrance and rich colors—including a range of purples.

lavender of the *Corylus* flower of February and to the purple standards set by lilac or delphinium.

Summer

Let's start the discussion of garden purples at the time when purple presents itself in its most robust and regal fashion in every aspect of the garden. In the long days of July and August, purples are varied in the hue range with the greatest saturation of pigment and the greatest contrast to the rich greens of foliage. Purple in the overhead structure of trees is led by copper beech (*Fagus sylvatica* 'Atropurpurea'), the grandest form of tree; Norway maple (*Acer platanoides* 'Faassen's Black'), a medium tree; and the purple plums (e.g., *Prunus cerasifera* 'Pissardii'), for flower and foliage.

Making the transition from trees to large shrubs are an eastern redbud (*Cercis canadensis* 'Forest Pansy') and purple-leaf hazelnut (*Corylus avellana* 'Atropurpurea'). A wonderful combination of purple in leaf and beige in flower is the royal purple smoke tree (*Cotinus coggygria* 'Royal Purple') with abundant flowers atop the deep purple carriage. The soft hues of purple in July and August are also evident in the mauves of *Hydrangea macrophylla* flowers and the lavender of orchid rockrose (*Cistus* x *purpureus*).

The seasonal color of mid-summer finds hollyhock (*Alcea rosea*), *Cosmos*, and species of *Petunia* and *Nicotiana*. Herbs and edibles are represented by purple basil (*Ocimum* 'Dark Opal'), sage (*Salvia officinalis* 'Tricolor'), and the various eggplants. The rich summer purples and lavenders start to give way to the more subtle accents and specialized locations of color as we start to look more closely for the succession of purple in the garden.

Fall

In September and October, the burgundy-purple flower buds of harlequin glorybower (*Clerodendrum trichotomum*) add a special flower accent. Heather (*Calluna* species) and fall aster (*Aster novi-belgii*) provide a splendid farewell to the long days. We now start to look more closely to twigs, such as *Cornus stolonifera* var. *occidentalis*, to the dark purple-edged leaves of *Fothergilla monticola* (a witch-hazel relative), and other magnificent bright fall foliage colors.

The anticipated display of beautyberry (*Callicarpa bodinieri* var. *giraldii*) is one of the most striking contributions to the narrowing source of purple hues at this time of the year. Its leaves also turn pink to purplish before falling. The small, clustered lilac flowers are followed by small violet fruit that lasts well into fall. The huckleberries (*Vaccinium* spp.) add the color and flavor of natural evergreens. Now we start to find the pale pink, purple blotched, fragrant flowers of the hardy *Cyclamen cilicium*, the frost-touched purple-edged leaves of *Euonymus fortunei* var. *radicans* 'Variegatus' shrubs, and the first of many heaths such as *Erica carnea*, *E.* 'Vivellii', *E.* 'C.D. Eason', and *E.* x *darleyensis* 'Darley Dale'.

By hard winter, subtle variations of purple are a harbinger of the short days and cold weather. November and December challenge us to look closely at the garden to find the continuing vein of year-round purple. We look at the cones of Ser-

The Berger Partnership

Late winter, early spring persists for weeks in *Helleborus orientalis*.

The Berger Partnership

The cascade of a *Wisteria sinensis* cultivar is backed by *Syringa vulgaris* 'Charles Joly'.

bian spruce (*Picea omorika*), stems of *Stachyurus praecox*, which push the purple edge toward burgundy, and the twigs of blueberry (*Vaccinium*) and purple birch (*Betula pendula* 'Purpurea'). The strongest purple in this season, however, may be a Husky banner anticipating another Rose Bowl game; sometimes the most immediate source of purple is African violet (*Saintpaulia* spp.) and *Cyclamen persicum* in the kitchen window.

Winter

Cold temperatures of winter bring pigment changes to create the special blend of purple in the foliage of Oregon grape (*Mahonia aquifolium*) and the deep bronze purples of the shrubby *Euphorbia wulfenii* foliage, *Euonymus fortunei* coloration, and English ivy (*Hedera helix*), the fruit of which is dark purple.

Snow provides the greatest contrast for seeking our color, as the first purple and yellow crocus emerge to herald longer days. Soon *Iris reticulata* and *Crocus vernus* begin the New Year's introduction of purple.

The beige and purple combination is back at this time of year; look very closely among the catkins of *Corylus cornuta* to find the tiny lavender-purple flowers that become summer hazelnuts.

January and February not only bring the new year, but a celebration of new life and color emerging from the leaf mulch as the days begin to lengthen. The purple buds of white forsythia—actually a forsythia relative (*Abeliophyllum distichum*)—soon transform from pale pink to pure white flowers, with a hint of early fragrance. Fragrance and color is amplified with the intense display of reddish purple *Daphne mezereum* flowers, borne on upright branches. Although the entire plant is poisonous, it is so stunning that its use in the landscape should be encouraged in appropriate locations.

The first of the rhododendrons to show color is *Rhododendron mucronulatum* with its delicate display of pale mauve flowers, followed by *R.* 'P.J.M.' displaying its magenta-purple flower, bronze-purple foliage, and its yet-to-emerge apple green, fragrant new foliage. We still look to specialized places for color: the purple cones of Korean fir (*Abies koreana*), grand fir (*Abies grandis*), and the twigs of the silky dogwood (*Cornus amomum*).

Spring

We look forward to March and April as a burst of energy that is soon to manifest itself in the garden. As the soil warms, we no longer have to seek exotic places in the garden to find sources of purple. March and April introduce a burst of purple from the softest lavender of *Iris japonica* to the riches of colors that emerge with spring bulbs.

Hyacinthus orientalis, tulips, Dutch iris, and alliums have always been Spring's reward of October planting. *Helleborus orientalis* and *H. foetidus*, with purplish margins and wonderful long-stemmed lanceolate leaves and fan-like foliage, create the next layer of purple height in the garden border.

Rhododendron 'Olive' and *R. reticulatum*

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create a backdrop with both evergreen and deciduous character. Looking higher in the garden, the new purple-tinted foliage of weeping crab apple (*Malus* 'Oekonomierat Echtermeyer') starts a continuum of color that is followed by purplish-red flowers and purple-red fruit in the fall. This is only one of many crab apples that display rich purples in spring and fall.

The purple leaves of the cherry plum (*Prunus cerasifera* 'Atropurpurea') provide a midsize source of rich foliage color and a contrast to its soft pink flowers and black-purple fruit of July. The purple stems of *Prunus cerasifera* 'Thundercloud' give way to a fading purple foliage and pale pink or white flowers.

As late spring's momentum of soil warmth, sunshine, and water fosters a bounty of new color, we find a purple pageant in every aspect of the garden, from the now full foliage of crab apples and flowering plums to an array of strong, textured iris. May and June fill the garden with a volume of foliage and flowers creating a multitude of purple options.

Magnolia liliiflora 'Nigra' embodies a wonderful combination of purple and white flowers atop a structure of green. A finale of purple rhododendrons occurs in 'Purple Splendour', a deep purple; in the darkest, richest purple color and hue for 'Fastuosum Flore Pleno'; and a pale lavender to white in 'Gomer Waterer'. This two-month period salutes purple in its most traditional forms as present in lilacs such as *Syringa* 'Ludwig Spaeth', *S.* 'Charles Joly', and in clematis such as *Clematis* x *jackmanii* and *C.* 'Ramona'.

The full effect of iris variety—in size, color, flower, form, and fragrance—is fulfilled in May and June with the last of the Dutch iris, Japanese iris, Siberian iris, and the orchid of irises—the incredible bearded irises.

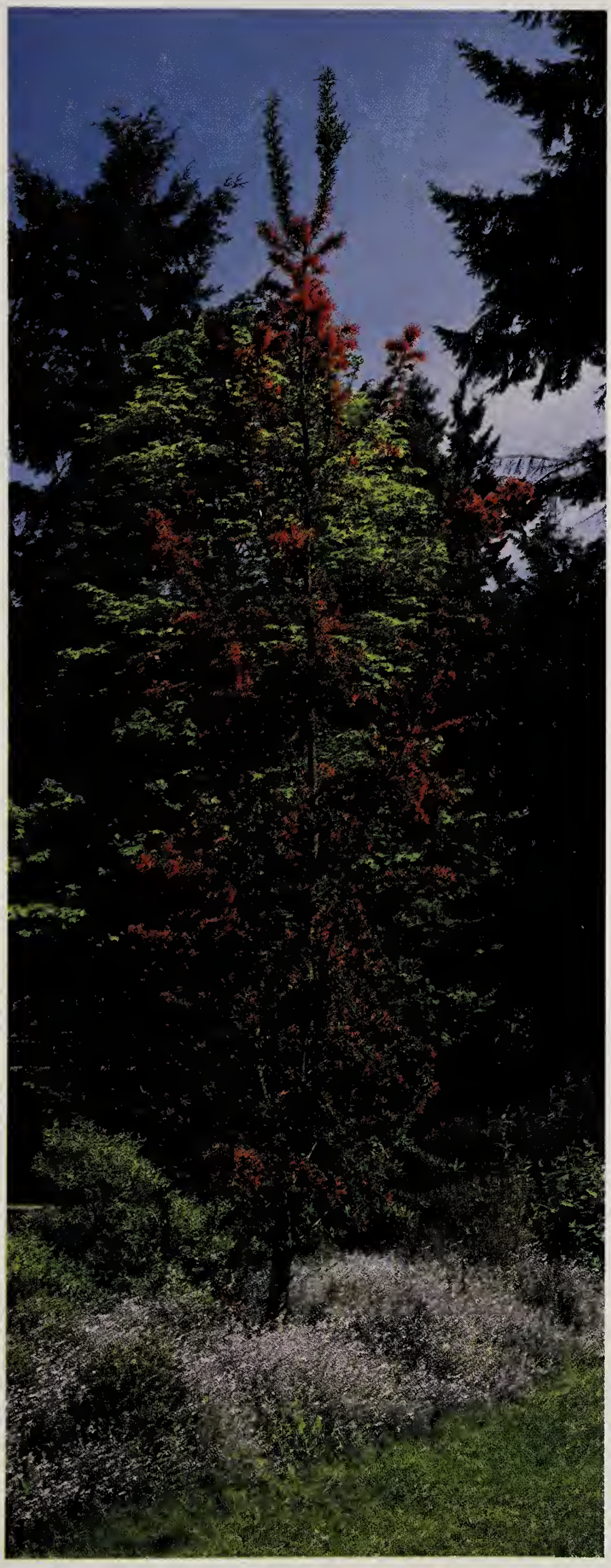
Although we have allowed the color purple to range from lights to darks, from red-purples to blue-purples, the common pigment of purple is ever present. As gardeners, we are all eager to make our garden a year-round source of pride. The pursuit of designing with successive, common elements—here, the color purple, which lies between the primary colors red and blue—can provide a great reward.

Tom Berger is the founding senior principal of the Berger Partnership, Seattle, Washington. As a Pacific Northwest native and a third generation nurseryman, his knowledge of, and enthusiasm for, plants is prodigious.

A Calendar of Flowering Trees

by Timothy Hohn

All of these small, flowering trees can be seen in the Washington Park Arboretum.



David McDonald

Embothrium coccineum, the Chilean fire tree

When we purchased our home in the north end of Seattle, space for some trees was a primary criterion. In our quest for a reasonable-sized city lot, we settled for a cinder-block house tailor-made for a bomb shelter. Now our real challenge is to plant a necessary camouflage of trees. Still, what should we select to achieve a lasting state of year-round arborescent bliss with relatively small ''testing grounds''?

The following small flowering trees and large shrubs should bring to the garden a nearly year-round measure of satisfaction. They are listed according to their blooming order, starting in winter.

Hamamelis mollis

I confess to being a witch-hazel lover, and I am always looking for new converts. The Chinese witch hazel is only one of several good species, selections, and hybrids. Naturally occurring in the wooded foothills of central China, the local people must wait until March or April to appreciate its flowering glory; in the Pacific Northwest we are fortunate to have flowers starting in January. Witch hazels develop into very handsome and distinctly vase-shaped small trees. Their elm-like leaves turn a bright, crispy yellow in the autumn.

The primrose-yellow flowers are delicate, arachnoid structures the size of silver dollars. The four thin petals roll out of the bud like streams of papier-mâché, releasing the most pleasant and permeating of aromas. Give *Hamamelis mollis* an organic, moisture-retentive soil in part shade with evergreen companions and winter bulbs, and it will never fail to please. The cultivars 'Early Bright' (not yet in the Arboretum), 'Goldcrest', 'Pallida', and 'Westerstede' are very nice selections.

Lindera obtusiloba

Another species from China, Korea, and Japan, this is an aromatic small, deciduous tree sometimes 20 feet tall with an open, rounded crown. The early blooms of this bush are very small golden-yellow flowers held in a tightly clustered, round inflorescence much like *Cornus mas* (Cornelian cherry). My earlier appreciation for *C. mas*

David McDonald

Yellow flowers of *Chimonanthus praecox* (above) and *Hamamelis mollis* (below)

Timothy Hohn

has paled considerably since I have grown familiar with the handsome lindera. The flowers burst from the nodes of the previous year's growth and line the branches for several feet from the tips.

The foliage of *Lindera obtusiloba* will strike many as very familiar; the leaves are often mitten-shaped like sassafras—a close relative in the Lauraceae (laurel family). As if the early bloom were not enough, the fall color of this little tree is near perfect, unblemished yellow. Plant lindera in filtered or north light with *Disanthus cercidifolius* (in the Hamamelidaceae), which has glorious, harlequin fall colors, and enjoy the show!

Magnolia x 'Susan'

It would seem a sin and a travesty to leave out a representative from the regal genus of flowering trees: *Magnolia*. In a stroke of objective brilliance while trying to decide which one to select, my dart landed on *M.* x 'Susan'.

'Susan' is a beautiful member of a group of hybrids affectionately known as "the girls." She was developed by William Kosar and Frances de Vos at the National Arboretum in 1956 using *Magnolia liliiflora* 'Nigra' and *M. stellata* 'Rosea'. Naturally, you would expect rather small offspring from this cross, and they are; 'Susan' usually matures at about twelve feet or so. The flowers appear before the leaves like stout, deep red-purple candles that unfurl into striking flowers of the same color, five inches wide. They decorate each branch tip during April in a dense profusion of color. Expressing its *M. liliiflora* lineage, one can expect occasional flowers to appear throughout the growing season. Planted in full or morning half-day sun in a friable, moisture-retentive soil, this tidy magnolia will surpass all of your expectations. It is a fine tree for the perennial border and courtyard, as a lawn specimen, or in groups with other trees and shrubs. Sister 'Anne', a similar but lighter, more muted maroonish pink, is also a fine selection.

Embothrium coccineum

The Chilean fire tree is without peer in the landscape when set ablaze with its scarlet, tubular flowers in late spring. In its native land, this nearly fastigiate deciduous tree can be seen guarding the streets of coastal towns or huddled in wind-swept masses at the rims of lofty volcanoes. It is perhaps the hardiest member of the Proteaceae with such tender relatives as *Banksia*, *Protea*, and *Leucodendron*. The stunning red flowers appear in tight clusters, crowding each other in the leaf axils of the previous year's growth. The individual flowers are pert, slightly curved little trumpets about an inch and a half long, muted with a prominent, exserted, and gold-tinged pistil. Once *Embothrium* commences flowering, it often remains in bloom for a month or more. What better thing to usher in the warm days of early summer? Granted a warm sunny spot and good garden soil, this garden aristocrat de austral will never fail to ignite interest. Consider a shimmering monochromatic planting of reds: *Embothrium*, the 'Velvet Cloak' smoke tree (*Cotinus coggygria*), and red New Zealand flax (*Phormium tenax* 'Atropurpureum')—and watch for the fire marshal!

Stewartia pseudocamellia

The Japanese stewartia have had no shortage of publicity over the years on these pages, and for good reason. Closely allied to *Camellia*, there are many species of attractive *Stewartia*, although *S.* pseudocamellia is my favorite.

Large pearly white buds begin to swell on this small deciduous tree about the time the *Embothrium* is tiring. Each flower bursts open with a large central boss of yellow-orange stamens surrounded by snowy white silky petals with ruffled edges. The trees are not overwhelmed with flowers but are pleasantly outfitted with an admirable quantity of two-inch blooms close to the tips of the branches. After the blossoms have faded and the woody capsules begin to take their place,

Glossary

Axil is the angle formed by the union of a leaf stalk with the stem. (Grant and Grant)

Boss is an ornamental projection.

Fastigiate refers to close, erect growth of a plant. (Grant and Grant)

Friable soil is loose and crumbly.

Hybrid is the result of a cross between two genetically dissimilar plants. (Grant and Grant)

Inflorescence is the flower cluster of a plant.

Panicle is a branched flower cluster.

Pinnate leaves have leaflets arranged at intervals on each side of an axis.

Pistil is the female organ of a flower.

Species is a natural group of plants composed of similar individuals. (Grant and Grant)

autumn begins to paint the leaves with slightly matted soft tones of yellow, orange, and maroon—a lovely fall kaleidoscope. When the leaves are finally shed, you will marvel at the multicolored bark of buff, tan, cinnamon, and plum.

The Japanese stewartia is best grown in half-day morning sun or partial sun in a moisture-retentive, organic soil similar to the woodland conditions in which it is found in Japan. Mature trees can be expected to reach twenty-five feet and will make handsome patio or courtyard trees and elegant small specimens.

Oxydendrum arboreum

This gorgeous southeastern United States native has justly received its share of kudos in all the horticultural literature. The sorrel tree or sourwood is a very narrow-crowned deciduous tree that works well in clusters. The large sprays of *Pieris*-like flowers fan out from the ends of the branches in August, forming small, floral petticoats over the entire height of the tree. Although each upside down urn-shaped flower is a pleasant ivory color, it is also effective in bud, giving the tree a long flowering period.

During drier years, the notorious fall color of sourwood commences early and coincides with the show of flowers in a wondrous scene. Each leaf may be splashed with several hot shades of orange and scarlet. The best effect will be achieved if sourwood is placed with its roots in the shade and its head in the sun. Find a location where two or three trees can be nestled snugly together with smaller red and yellow fall color companions such as lindera and burning bush (*Euonymus alatus* 'Compacta').

Koelreuteria bipinnata

The leaves on this often windswept-looking tree are huge—they are doubly pinnate, as the specific name *bipinnata* implies. At first glance, you might be deceived, but upon closer inspection you will notice that each leaf blade is really a leaflet. This is an uncommon species of an Oriental genus that flowers much later than the more common *Koelreuteria paniculata*, the goldenrain tree.

Blooming in August, September, or October, large panicles of yellow pea-like flowers burst out of the branch ends in airy profusion. What a sight it is to see the somewhat coarse foliage topped with such a pleasantly diffused and golden light in the waning summer sun. Then, unexpectedly, the curious inflated pods which commonly conceal a few hard, black seeds mature to a lovely shade of rosy pink rather than the unsightly brown of the more common species. The flowers and fruits provide a lasting show from the end of summer until the first frost. The "Chinese lanterns" will retain their color and are excellent for drying.

Koelreuteria bipinnata is not so hardy as its more common cousin, but will do fine in western Washington where it tolerates drought, heat, alkaline soils, and pollution. It makes a picturesque and rugged specimen tree or is excellent in a mixed planting.

Arbutus x *andrachnoides*

A naturally occurring hybrid between *Arbutus andrachne* and *A. unedo*, found in Greece, this variable small evergreen tree thrives on sunny neglect. Depending on which parent held sway in genetic recombination, the offspring may have characteristics more akin to one than to the other. It is the fall blooming offspring—which may reach thirty feet in England—that I recommend.

Typical of a strawberry tree, the blossoms are white urns held upside down in four-inch panicles during October and November. The seasonal paradox often catches the casual observer unawares. The dark green foliage plays the perfect companion to the pendulous panicles. Unlike the common strawberry tree, the hybrid has bark similar to our own native madrone, *Arbutus menziesii*. The smaller branches and twigs may be a dark maroon grading into a lighter salmon red on the polished older limbs. *Arbutus* x *andrachnoides* should be planted where the magnificent bark can be touched and appreciated. Consider other drought-tolerant companions from its homeland—rock roses, lavenders, brooms, and various herbs.

There you have it—a passel of prime trees sure to keep you in flowers for most of the year. Wait a minute, there are several more trees that you must have in addition to these and. . . .

Timothy Hohn is curator of living collections, University of Washington Center for Urban Horticulture and the Washington Park Arboretum.

Reference

Grant, John. A., and Carol L. Grant. 1990. Revised by Marvin E. Black, Brian O. Mulligan, Joseph A. Witt, and Jean G. Witt. *Trees and Shrubs for Pacific Northwest Gardens*. Portland, Oregon: Timber Press.

New on the Shelves
of the Elisabeth C. Miller Library

Courtesy, University Photography, University of Washington

by Valerie Easton

Arms, Karen, *Environmental Gardening*. Savannah: Halfmoon Publishing, 1992. ISBN 0-9629275-6-2.

Written by a biologist who encourages the gardener to see his/her own garden as part of the larger environment, this book is much more than an organic gardening manual. Design, color, microclimates, weeds, and wildlife are all considered from the perspective of gardening in harmony with nature.

Hensel, Margaret. *English Cottage Gardening for American Gardeners*. New York: W.W. Norton and Company, 1992. ISBN 0-393-03012-1.

Oversized with inspiring color photographs, reading this book is like taking a guided tour throughout the English countryside. Trees, shrubs, vines, and perennials mingle in riotous color over and around thatch-roofed cottages. Throughout the book, despite the essential Englishness of it all, the author emphasizes which plants and design ideas are most easily transferable to our own soil, climate, and style here in the United States.

Williams, Sally. *Garden Literature: An Index to Periodicals and Book Reviews*. Boston, MA: Garden Literature Press, 1992.

Published quarterly, with an annual cumulation, the first issue was January-March 1992. Included are Northwest publications such as *Hortus Northwest*, *Pacific Horticulture*, and the *Washington Park Arboretum Bulletin's* first inclusion in a national index.

Further Reading

Arnold, Henry F. *Trees in Urban Design*. 2nd ed. New York: Van Nostrand Reinhold, 1993. ISBN 0-442-00889-9.

Challis, Myles. *Large-leaved Perennials*. London: Ward Lock, 1992. ISBN 0-7063-7058-9.

Keeney, Elizabeth. *The Botanizers: Amateur Scientists in Nineteenth Century America*. Chapel Hill: University of North Carolina Press, 1992. ISBN 0-8078-2046-6.

McHoy, Peter. *Fences, Trellises, and Screens*. Garden Matters. London: Ward Lock, 1992. ISBN 0-7063-7039-2.

Mulligan, William C. *The Adventurous Gardener's Sourcebook of Rare and Unusual Plants*. New York: Simon & Schuster, 1992. ISBN 0-671-75104-2.

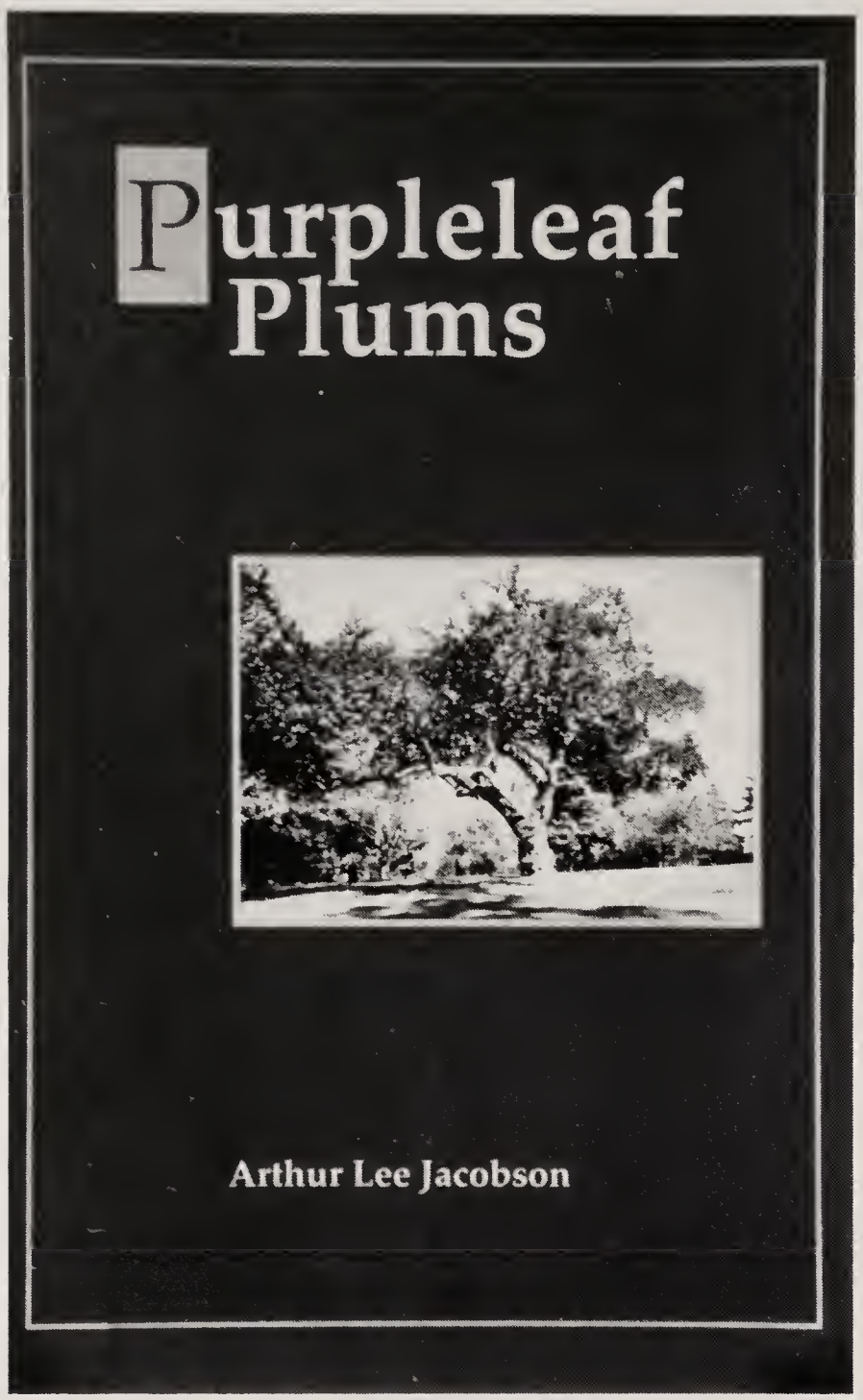
Rosenfeld, Lois G. *The Garden Tourist: A Guide to Garden Tours, Garden Days, Shows and Special Events*. Portland: Timber Press, 1993. ISBN 0-88192-270-6.

Scott, Jane. *Field and Forest: A Guide to Native Landscapes for Gardeners and Naturalists*. New York: Walker, 1992. ISBN 0-8027-1193-6.

Plant Questions?

Bring your plant identification questions to the Washington Garden Clinic at the Center for Urban Horticulture's Miller Library. Each Monday from 4 p.m. to 8 p.m., year-round, you can consult with the Washington State University/King County Master Gardeners about your plant problem, have experts identify plant material, and then have library specialists advise you where and how to find the written resources you need.

The Elisabeth C. Miller Library is located at 3501 NE 41st, Seattle, WA. Hours are: Monday, 9 a.m. to 8 p.m.; Tuesday through Friday, 9 a.m. to 5 p.m.



Book Reviews

Purpleleaf Plums. Arthur Lee Jacobson. Portland, Oregon: Timber Press, 1992. ISBN 0-88192-255-2. $27.95, hardcover.

Unlike roses, dwarf conifers, and any number of plant groups, purpleleaf plums have never inspired the admiration and awe of plant fanciers. For most, they are but anonymous blobs of purple relegated to that ill-defined status normally associated with willows and eucalypts.

Leave it to Arthur Lee Jacobson, author of *Trees of Seattle* and *Trees of Greenlake*, to uncover their secrets and subtle beauty. Where most see a small tree with pink or purple blossoms, Jacobson takes in endless variation. His new volume, *Purpleleaf Plums*, is a comprehensive description of the group.

Only a plantsman with his curiosity, tenacity, and enthusiasm could succeed in transferring his love for these plants to each page. The book looks in detail at the most important purpleleaf plum cultivars. Chapters offer comparisons of characteristics such as flowers and fruit, tree size and form, season of bloom, and cold hardiness for members of the group. The book also includes both leaf and flower keys for identification of cultivars. The bulk of the volume is taken up with descriptions of over 50 individual cultivars. Each details the origin of the cultivar (and the author's effort to uncover it), as well as plant characteristics and commercial availability.

Purpleleaf Plums is written with the educated amateur in mind. It is systematic in approach and coverage, applicable wherever purpleleaf plums are grown. Not everyone will appreciate the subtle differences within the group. But most gardeners will acknowledge Arthur Lee Jacobson's love for this group and enjoy the detective story that makes each cultivar description a personal journey.—*Reviewed by Jim Clark*

Jim Clark is vice president of HortScience, Inc., a horticultural consulting firm in Pleasanton, California.

The Encyclopedia of Ornamental Grasses. John Greenlee. Emmaus, Pennsylvania: Rodale Press. 1992. ISBN 0-87596-100-2. $29.95, hardcover.

Perhaps no other group of plants offers a show of year-round interest in the garden as engaging as that of the grasses. With each season, they adopt new roles and, often, new costumes, as well. The exuberance of spring and the fruitfulness of summer become a sturdy and harmonious maturity in autumn, then steadfast and subtle through the sleep of winter.

The Northwest gardener, wishing to become more familiar with these garden characters, will find much useful descriptive and cultural information in this ambitious encyclopedia of ornamental grasses. John Greenlee, proprietor of Greenlee Nursery in Pomona, California, describes the work as "a consensus of nursery growers, authors, and botanists." The contributions of growers are apparent: information describing available varieties is up to date, but also reflects some of the confusion present in the trade regarding ornamental grass nomenclature. Greenlee freely acknowledges as much, and offers this book

as ''a beginning, not an end'' for the gardener and student of grasses.

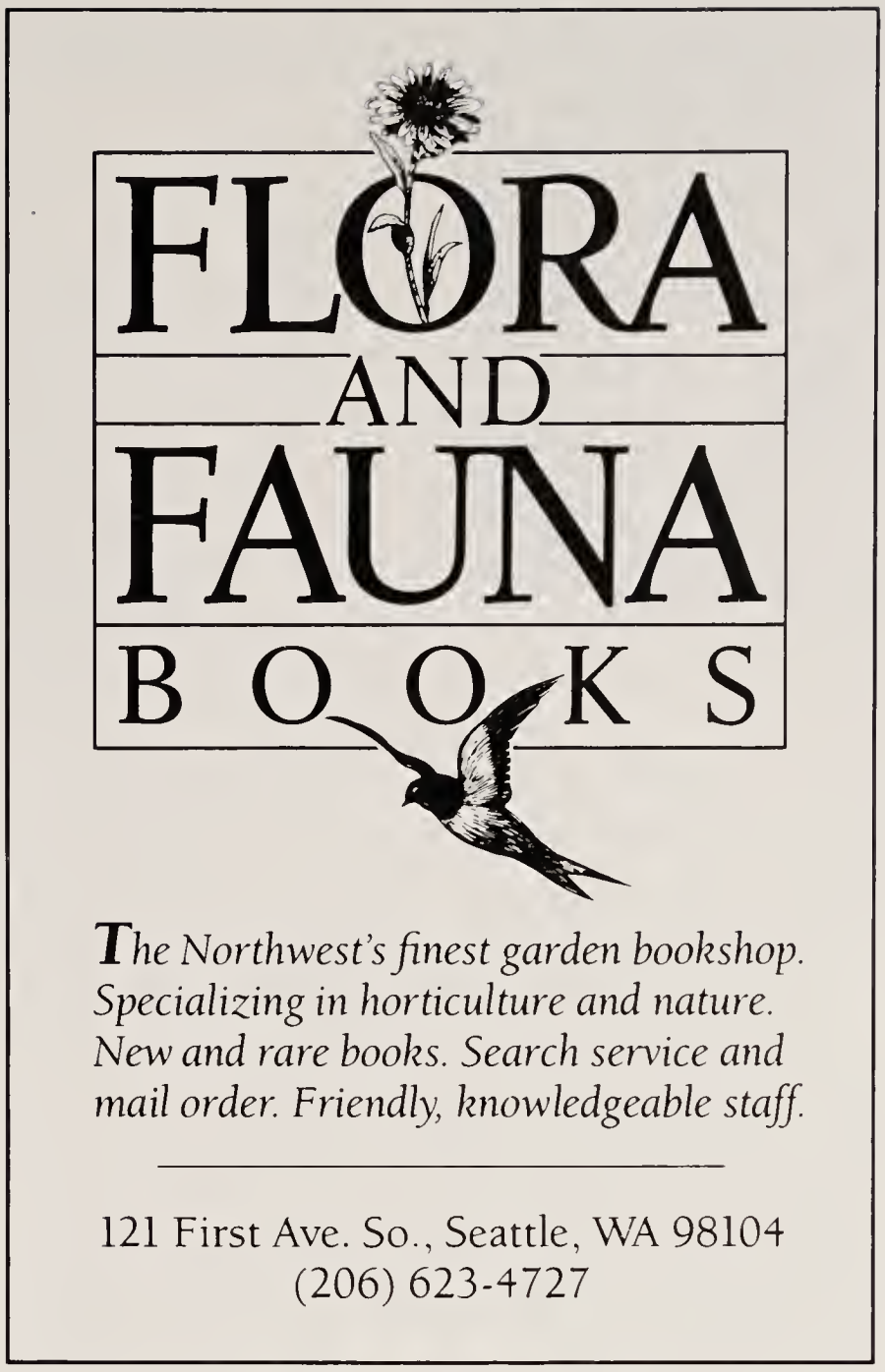
A fine beginning it is. A primer on ornamental grass culture and maintenance is included, along with an extensive bibliography of popular grass literature, useful listings of plant and seed sources and a brief, informative section of sample garden plans by noted American designers. The main body of this book comprises descriptions of the appearance, habits, culture, and uses of over 250 grasses, arranged alphabetically by botanical name. Color photographs by Derek Fell accompany most entries.

Awareness of the environmental consequences of our landscape choices permeates this book. The author argues for ''horticulture and ecology in harmony,'' as he points out that fertilizer and pesticides are not typically required in the culture of grasses and introduces water-wise plants that can help us to achieve ecologically sound gardens.

This is the best reference yet available to the gardener on this subject, but we can hope that John Greenlee intends to refine and expand this book. Although the structure and basic information represent a strong beginning, this work would benefit from thorough taxonomic scrutiny and from further review by gardeners and growers in diverse climates. Such refinement could bring this into the first rank of reference books for gardeners.—*Reviewed by Eric Nelson*

Eric Nelson is a member of the board of The Arboretum Foundation and a former member of the continuing education team at the University of Washington Center for Urban Horticulture. He makes sure that ornamental grasses are well represented at Arboretum plant sales and frequently makes presentations on these versatile plants.

Alaska Northwest Books has a new ''800'' number for ordering *Garden Touring in the Pacific Northwest: A Guide to Gardens and Specialty Nurseries in Oregon, Washington, and British Columbia* by Jan Kowalczewski Whitner (featured in the winter 1992/93 issue of the *Bulletin*). Call 1-800-452-3032 to order direct.



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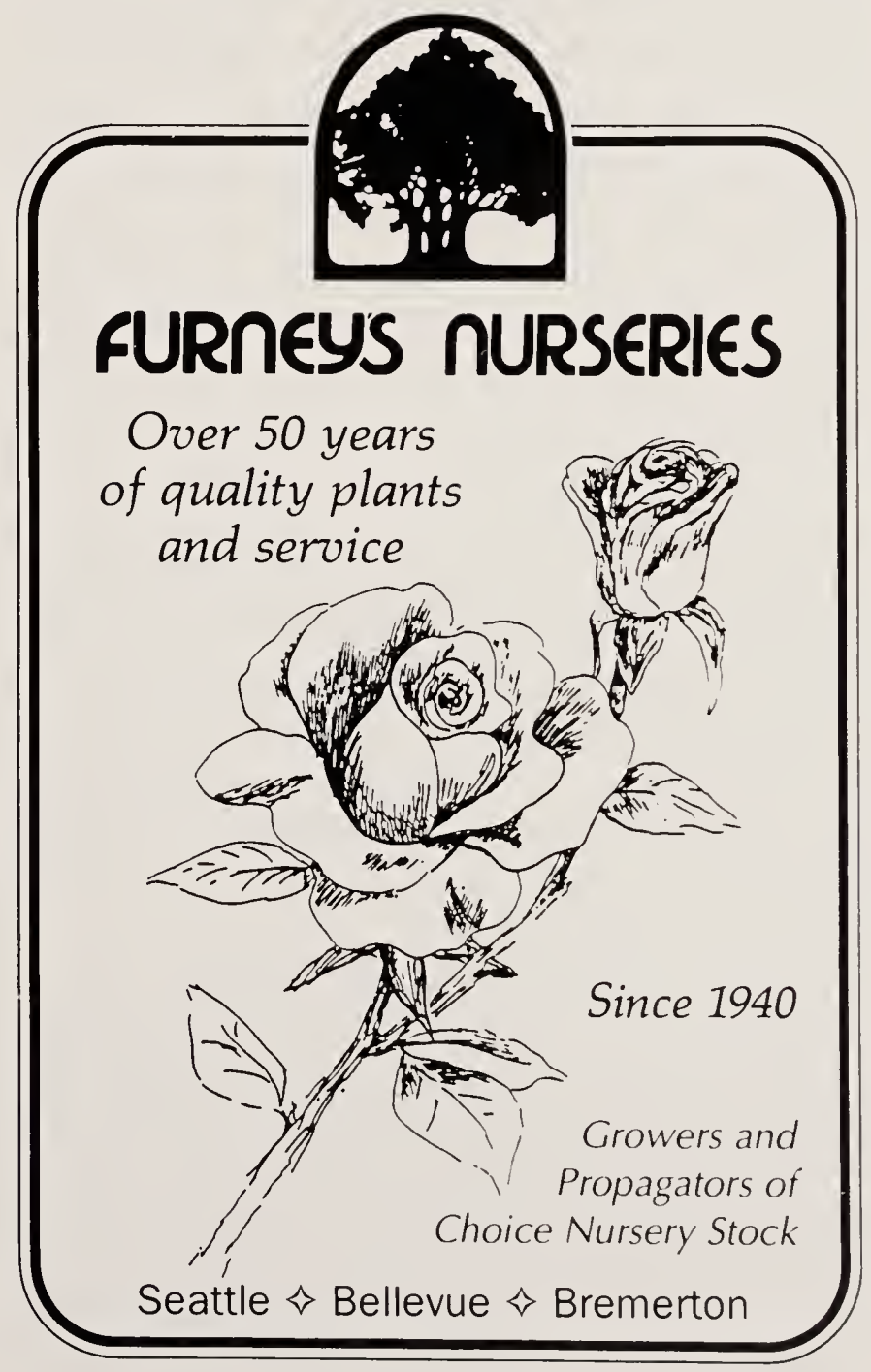

For Further Information:

Year-Round Gardening

by Valerie Easton

Our Pacific Northwest gardens are beautiful in their spring bloom. Bookshelves are filled with titles on how to create gardens overflowing with summer flowers. In recent years, there have been inspiring books published on gardening in autumn and in winter. Gardeners, working with limited time, budget, and space, realize the value of gardens with year-round interest. To successfully underplant a glowing Japanese maple with a colony of autumn crocus, to have camellias in bloom at Christmas, or to venture out into the garden in January to cut a branch of fragrant yellow Chinese witch hazel—all bring a special joy.

It is possible, if challenging, to create gardens with interesting foliage, color, and scent in every month of the year. Anne Lovejoy, in her two books, *The Year in Bloom: Gardening for All Seasons in the Pacific Northwest* (Seattle: Sasquatch Books, 1987) and *The Border in Bloom: A Northwest Garden through the Seasons* (Seattle: Sasquatch Books, 1990), encourages this approach by dividing the Northwest garden year into six observable seasons: early and high summer, early and late winter, as well as spring and autumn. Favorite varieties and their sources, garden chores, and design ideas are arranged by season and month to give continuity to the gardening year. Season-spanning plants such as *Schizostylis*, *Clematis*, bulbs, and even roses are emphasized, with discussions on color, composting, and all the possibilities for gardening in our climate.

A beautiful book that sets out to destroy the gardener's frequent excuse of "you should have seen my garden last week" (or "last month"), *A Garden for All Seasons* (London: Reader's Digest Association Ltd., 1991) emphasizes garden planning for the whole year. A detailed discussion of the effect on plants of weather patterns, light, and rainfall is useful despite its British origins, as is an excellent explanation of microclimates in the garden.

Arrangement is by type of plant (trees, shrubs, perennials, etc.) in each season, and is illustrated with gorgeous and plentiful color photographs and drawings. A major strength of the book is its emphasis on plant combinations. In both illustrations and text, plants are treated as part of the garden picture, shown and discussed in relation to appropriate companions. The most useful single book on year-round gardening, this title inspires, instructs, and is a pleasure to open again and again.

The design possibilities inherent in planning for year-round gardens are perhaps best illustrated in the work of Wolfgang Oehme and James van Sweden. In *Bold Romantic Gardens: The New World Landscapes of Oehme and van Sweden* (Reston, VA: Acropolis Books, Ltd., 1990), the grasses and perennials used so extensively and effectively by these designers show us the beauty of the entire life cycle of a plant; the lushness of spring is layer upon layer of green; late autumn is bleached grasses behind the vibrant rust of *Sedum* x *telephium* 'Autumn Joy'. Lighting, water, rocks, sculpture, as well as the plumes of grasses and drifts of long-blooming perennials, create gardens of interest no matter what time of year.

The use of foliage to create year-round interest in the garden is the focus of *Leaves* by Michael Jefferson-Brown (London: David & Charles, 1989) and *Architectural Foliage* by Jill Billington (London: Ward Lock, Ltd., 1991). The fleeting charm of flowers is contrasted here to emphasize the more enduring contributions of form, shape, color, and texture given to the garden by plants whose main attribute is their foliage. Going beyond the gunneras and hostas that immediately come to mind, the authors discuss a wide variety of plants—from vines to diminutive ground covers—and what each contributes in its season.

Striking combinations of foliage are illustrated in these books, such as the use of the sensitive fern (*Onoclea sensibilis*) which crowds the bold, purple-tinted leaves of *Rodgersia aesculifolia*. Despite this, we still wish for bloom and scent in our gardens. *Color in Your Garden* by Penelope Hobhouse (Boston: Little, Brown and Company, 1985) looks at foliage in its more traditional role as a framework for flowers. Color theory, how it applies to garden design, and how to bring color to the garden throughout the year is Hobhouses's ambitious and largely realized goal in this thorough book. Her essay on the nature of color is well illustrated with unusual color combinations, such as an intensely purple *Clematis* x *jackmanii* wandering over a crimson rose into a copper-leaved hedge of *Berberis thunbergii* 'Atropurpurea'. Not your everyday color combination, but very effective.

Valerie Easton is a horticultural librarian with the University of Washington's Center for Urban Horticulture, as well as a writer and gardener.

In the Washington Park Arboretum

by Timothy Hohn

Mary Levin, University Photography, University of Washington

Year in Review—Excerpts from the 1992 Report of the Washington Park Arboretum, University of Washington

Documentation

Registrar Tracy Omar reported that at the end of 1992, the total number of accessioned plants in the collection of the Washington Park Arboretum numbered approximately 15,000. These plants represent over 4,500 different species and cultivated varieties. In 1992, 1,000 new small labels and 60 large display labels were placed on prominent trees.

Development and Propagation

Curator Timothy Hohn added 137 new accessions to the collections in 1992. New collections reflect widespread interests, including new plants with potential landscape value, such as *Pterostyrax psilophyllus* and *Hamamelis* 'Fire Charm'. Taxonomic diversity also is being increased so that little-known families such as the Epacridaceae (from the southern hemisphere) are represented and so that our traditionally strong collections—such as *Abies*, *Acer*, *Acer palmatum* cultivars, *Alnus*, *Betula*, *Hamamelis*, *Ilex*, *Magnolia*, *Quercus*, *Sorbus*, and *Viburnum*—will be comprehensive enough to have national and international significance. Many of the new accessions will contribute to the New Zealand, Chilean, and enhanced Mediterranean collections envisioned for the not-too-distant future. Larry Vickerman, who graduated in 1992, documented the importance of the Arboretum's collections in the Pacific Northwest, finding that we have by far the greatest taxonomic diversity and the greatest number of unique species of any public garden in the area.

Propagator Barbara Selemon reported that the propagation and nursery areas contain 522 accessions being grown for eventual planting. In 1992, she propagated 64 of these from seeds and cuttings, many of them taxa for which there is little or no information available on propagation technique.

Introduction and Plant Exchanges

In 1992, the Washington Park Arboretum also selected *Acer macrophyllum* 'Seattle Sentinel' for introduction to the landscape trade and to other botanical institutions, promoting it widely in trade publications and providing limited material for propagation. That maple joined other recent Arboretum introductions such as *Sarcococca orientalis*, *Garrya* x *issaquahensis*, and *Nothofagus antarctica* 'Puget Pillar'. In 1993, we are promoting the Mediterranean species *Bupleurum fruticosum*, a striking woody member of the carrot family (Umbelliferae).

Arboretum staff and volunteers distribute selected plant material in response to requests. Barbara Selemon distributed 156 accessions in 1992, mostly to commercial nurseries (13), to botanical and educational institutions (105, of which 82 were local), and to the Arboretum Foundation for plant sales (24). In 1992, volunteers for the Arboretum's *Index Seminum* (part of an international seed exchange) sent seed of 204 taxa to 142 institutions in 11 states and in 31 countries.

Collection Management

Horticulturist Christina Pfeiffer reported that in 1992 a total of 644 plants from 220 accessions were planted at the Arboretum. Thanks to a well-conceived, highly efficient irrigation management scheme used by Pfeiffer and her staff, the driest summer in recent memory did not have the impact that was feared.

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Camellia japonica 'High Hat'

Arborist Lou Stubecki and contractors under his supervision removed 38 hazard trees and conducted 78 hazard pruning operations in 1992. They also cabled and braced 34 trees. Finally, the crew reduced the deleterious impact of crowded trees on one another by removing 74 trees and pruning 237 others.

Voucher Specimen Collecting

Taxonomist Clement Hamilton, director of the Center for Urban Horticulture, and students Sarah Reichard, Larry Vickerman, and Nian Nian Chen, plus many volunteers, continued to collect dried-pressed specimens in 1992, and to check identifications of Arboretum collections. The Hyde Hortorium now numbers over 9,000 specimens, most of which were collected in the Arboretum. Identification efforts in 1992 centered on the genus *Rhododendron*.

Conservation

As a designated rescue center for the Department of Interior's Fish and Wildlife Service, the Arboretum received and intercepted an illegal shipment of seeds of *Fitzroya cupressoides* entering the United States from Chile. We are now growing this endangered species of large conifer for the collection. The Boeing Company paid for transplanting into our collections three specimens of *Taxus brevifolia*, the Pacific yew, from property scheduled for development. Several other conifer accessions also represent endangered taxa, such as species of *Abies*, *Pinus*, and the Chilean *Pilgerodendron uviferum*.

Education and Interpretation

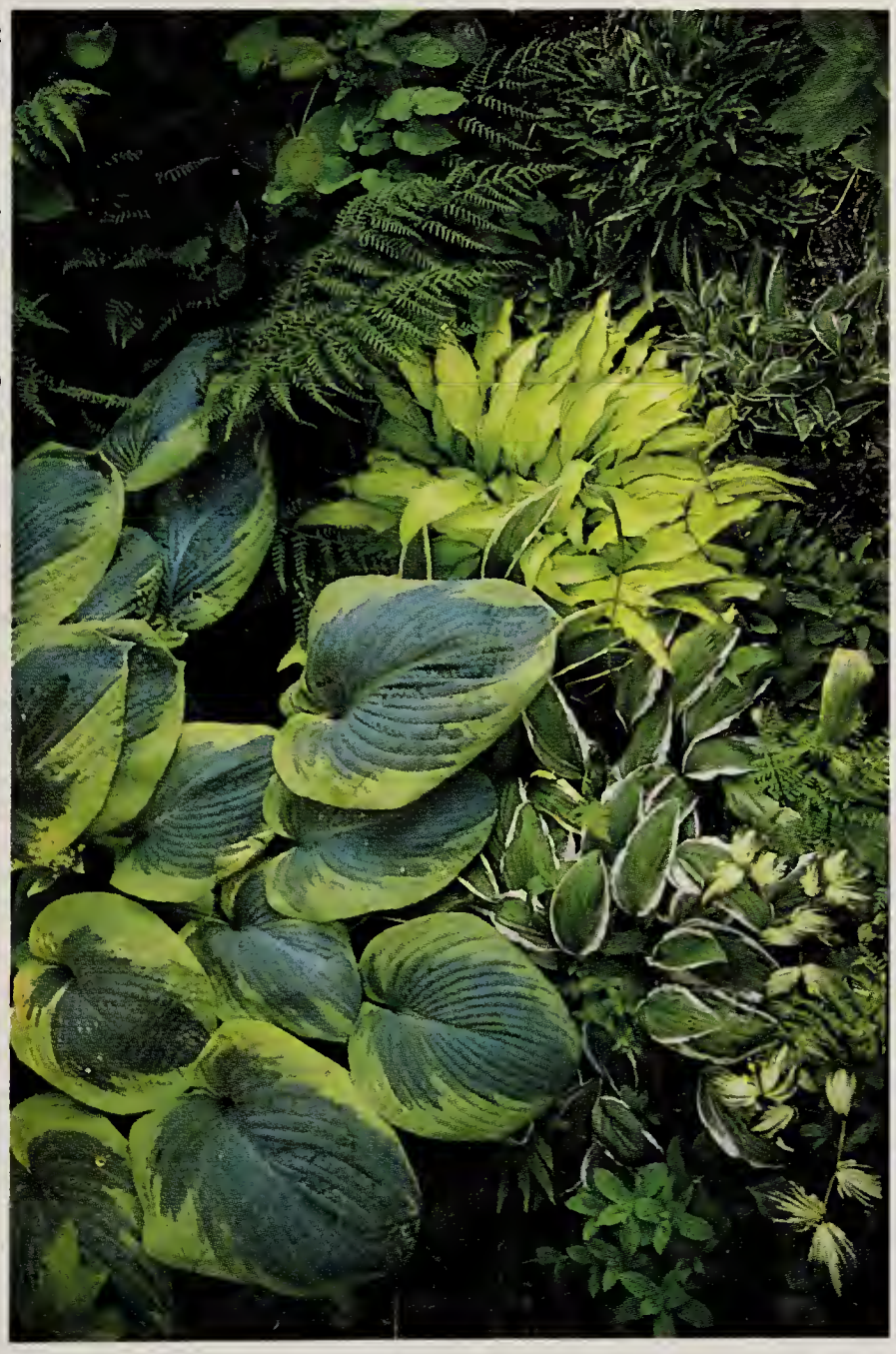
Last year, education coordinator Lynda Ransley and company shared the Arboretum with about 2,250 students from pre-school through sixth grade. They provided programs on plant propagation, habitat study, role of plants, environmental stewardship, leaf classification, seeds, native plants, recycling, and composting. New volunteers for the children's program completed a seven-week training program in preparation for this spring, when over 20 volunteers will participate with the youngsters.

Timothy Hohn is curator of living collections for the University of Washington Center for Urban Horticulture and the Washington Park Arboretum.

Twelve Months of Garden Textures

Spring, summer . . .

Good Shepherd Center Dan Borroff



Withey-Price Design Photo by Dan Borroff

Michael Schultz Design Photo by Dan Borroff

Top (spring): Bearded *Iris pallida* 'Aurea Variegata'. Green *Helleborus corsicus* (r.). Mixture of yellow lily tulips and Darwin tulips. **Lower left** (spring): *Hosta* 'Frances Williams' (l.l.), five dwarf hostas and a variegated *Disporum* (l.r.). **Lower right** (summer): *Trachycarpus fortunei* (u.l.). Background, Mugo pine and spikes of yucca to the right of *Euphorbia characias*. Mixed *Dianthus* (l.l.).

Fall & winter.

Dan Borroff Design Photo by Doug Wilson, courtesy of Sunset Magazine

Dan Borroff Design Photo by Doug Wilson, courtesy of Sunset Magazine

David McDonald

David McDonald

Upper left (fall): *Artemisia* 'Huntington Hybrid' with flowers of *Erysimum* 'Bowle's Mauve', in Susie Marglin's garden. **Upper right** (fall): *Alstroemeria* 'Princess Victoria' (u.l.). *Sisyrinchium* 'Aunt May' (lower). **Lower left** (winter): Bare branches of *Acer palmatum dissectum* in the Kubota Gardens. Red berries of *Cotoneaster horizontalis* in front of *Erica carnea*. **Lower right** (winter): *Cornus alba* 'Elegantissima' (r.), *Cornus alba* 'Kelseyi' (l.l.) and *Salix purpurea* 'Nana' (l.).

David McDonald

The most fascinating of winter texture, blossom, color, and fragrance comes together in *Hamamelis* x *intermedia*.

WASHINGTON PARK

ARBORETUM

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